

ABSTRACT OF THE DISCLOSURE

[0078] A key engine that performs route lookups for a plurality of keys may include a data processing portion configured to process one data item at a time and to request data when needed. A buffer may be configured to store a partial result from the data processing portion. A controller may be configured to load the partial result from the data processing portion into the buffer. The controller also may be configured to input another data item into the data processing portion for processing while requested data is obtained for a prior data item. A number of these key engines may be used by a routing unit to perform a large number of route lookups at the same time.

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